Lab-Programme-4
Develop a Java program to create an abstract class name Shape that contains two integers & an empty method named printA Provide three classes extending Shape

```
public class Boxtest{
    public static void main(String args[]){
    Rectangle rect = new Rectangle(9,5);
    Triangle tri = new Triangle(10,8);
    Circle cir = new circle(10,10);
    Figure figure;
    figure=rect; figure.printArea();
    figure=tri; figure.printArea();
  } figure=cir; figureArea();
}

abstract class Figure{
 double side1;
 double side2;
 Figure(double a, double b){
 side1=a;
 side2=b;
 }
 abstract void printArea();
 }
 class Rectangle extends Figure{
 Rectangle(double a, double b){
 super(a,b); }
 void printArea(){
  double area = side1 * side2;
  System.out.println("Inside Area for Rectangle");
  System.out.println("Area of Rectangle is = "+area);
 }}
```

```
class Triangle extends Figure {
Triangle (double a, double b) {
super (a, b); }
void printArea() {
 double area = side1 * side2/2;
System.out.println ("Inside Area for Triangle is.")
System.out.println (" Area of Triangle is = "+area);
}}
class circle extends Figure {
   circle (double a, double b) {
 super (a, b); }
void printArea() {
double area = Math.PI * side1 * side2;
 System.out.println (" Inside Area of Circle is - ");
System.out.println (" Area of Circle is = "+area);
}}
```

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Lab Programme-5

```
importe java.util.Scanner;

class Account {
        String name, accountType;
        int accountNO;
        double balance;
  Account (String name, int accountNO, String accountType,
                        double balance) {
      this.name = name;
      this.accountNO = accountNO;
      this.accountType = accountType;
      this.balance = balance;
    3
  void Display Status() {
    System.out.println("*** " + this.accountType + "***");
    System.out.println("Name: " + this.name);
    System.out.println(" AccountNO: " + this.accountNO);
    System.out.println(" AccountType:" + this.accountType);
    System.out.println(" Balance: " + this.balance);
    3
}
class SavAcct extends Account {
      double depositAmount, Withdrawamount;
  SavAcct(String name, int accountNO, String AccountType,
                  double balance) {
     super(name, accountNO, accountType, balance);
    3

  static Scanner input = new Scanner(System.in);
  private void checkbalance() {
       if(balance =0) {
```

```
System.out.println("Transaction is notpossiable.
        Balance becomes less than zero");
    balance += Withdrawamount;
        withdrawamount = 0;
        withdraw~~amount~~();
        }
    }
void CalInterest(){
    System.out.println("Interest To Be added");
    System.out.println("Annual rate of interest: 4%");
   System.out.println("Enter the tenure in terms of year");
  int tenure = input.nextInt();
  balance = balance *Math.pow(1.04, tenure); }
void Deposit(){
     System.out.println("Enter the Deposit amount");
     depositAmount = input.nextDouble();
     balance += depositAmount; }
 void Withdraw(){
    System.out.println("Enter the Withdrawalamount");
    Withdrawamount = input.nextDouble();
     balance ~~-~~-= Withdrawamount;
     checkBalance();
     System.out.println("Withdraw Amount ="
                        +Withdrawamount);
    } }

class currAcct extends Account{
   double minBalance = 1000;
   double depositAmount, Withdrawamount;
   Static Scanner input = new Scanner(System.in);
  currAcct(String name, int accountNo, String accountType,
             double balance){
   super(name, accountNo, accountType, balance);
  }
```

```
private void check balace (){
    if(balance < min Balance){
        System.out.println ("Transaction is not
    possiable, Balance becomes less than minimum
     balance.");
    balance += Withdrawamount;
   System.out.println ("Do u still want to do the
        transaction with added service charges");
    String ans = input.next();
    if (ans.toLowerCase().equals("yes")){
     balance -= (Withdrawamount + (0.05*Withdraw
                                    amount)+1000);
   System.out.printlen("Alert. Negative balance. In
         Serivice Charge Added :"+(0.05*Withdrawamount));
   }else{ Withdrawamount =0;
      }
   }}
void Deposit(){
     System.out.println("Enter the Deposit amount");
     deposit Amount = input.nextDouble();
       balance += depositAmount;
   }
 void Withdraw(){
 System.out.printlen("Enter the Withdrawal
                    amount");
  Withdrawamount = input.nextDouble();
   balance -= Withdrawamount;
    CheckBalance();
  System.out.printlen ("withdraw amount = "+
                    Withdrawamount);
  }}
```

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```
public class Banktest {
    public static void main (String [] args){
     Scanner in= new Scanner(System.in);
    System.out.println ("Enter the name");
    String name = in.next().
   System.out.println("Enter the accountno.");
   int num= in.nextInt();
    int i=0;
   While i<8){
   System.out.println("Enter the account type In
     Curr - Current . In Sav- savings account . If
        And 'Balance .");
   String type = in.next();
   if (type. equals ("curr")){
       double bal = in.nextInt();
   CurrAcct . C1 = new CurrAcct (name, num,
      "Current Account ", bal);
    C1. DisplayStatus();
    C1. Deposit ();
    C1. DisplayStatus();
    C1. Withdraw();
    C1. DisplayStatus();
  } else if (type. toLowerCase().equals ("sav")){
      double bal =in.nextInt();
    SavAcct S1 = new SavAcct (name, num, "Savings
           Account ", bal);
     S1 .DisplayStatus();
     S1. Deposit();
     S1. DisplayStatus();
     S1. Withdraw ();
     S1. DisplayStatus();
     S1. calcInterest();
     S1. DisplayStatus ();
    }
    } i++;
 }
```

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